

Amendment and Response Under 37 C.F.R. 1.116

Applicant: Harry A. Loder et al.

Serial No.: 09/643,333

Filed: August 22, 2000

Docket No.: 55243US009

Title: OPTICAL FIBER CONNECTOR SYSTEM

wherein each receiving cavity has a frontal opening;
at least one folding door comprising a hinge plate formed integrally with a pair of biasing members to cover the frontal openings of a pair of the plurality of receiving cavities, there being an intervening wall between the pair of receiving cavities; and
a connection adapted to secure the hinge plate adjacent the intervening wall to provide attachment of the folding door to the backplane housing.

10. The fiber optic connecting system of claim 9 wherein the at least one folding door includes at least one latch and the intervening wall has at least one latch seat formed therein, the connection produced by engagement of the latch with the latch seat.

11. The fiber optic connecting system of claim 8 wherein the pair of biasing members comprise a metallic material.

12. The fiber optic connecting system of claim 11 wherein the metallic material is selected from the group consisting of stainless steel alloys and beryllium/copper.

23. (Amended) A backplane connector assembly for making optical connections through a backplane, the connector assembly comprising

a backplane housing defining at least one longitudinal receiving cavity through the backplane, the receiving cavity having a frontal opening along the front surface of the backplane member configured to receive a first optical connector and a rear opening along the back surface of the backplane member configured to receive a second optical connector;

a single-piece integral spring member frontal door foldable from a single side of the receiving cavity at least covering a center portion of the frontal opening; and
a single-piece integral spring member rear door foldable from a single side of the receiving cavity at least covering a center portion of the rear opening;

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wherein the doors automatically close when an optical connector member is not placed in the respective opening and automatically fold when a connector member is inserted into the respective opening, wherein the front door and the rear door operate independently from each other.

24. The backplane connector assembly of claim 23, wherein at least one of the doors includes an electrically conductive material and the door is electrically grounded.

25. The backplane connector assembly of claim 23, wherein the backplane housing includes a dielectric material and is not electrically conductive.

26. The backplane connector assembly of claim 23, wherein the backplane housing is electrically conductive and is electrically grounded and the doors are non electrically conductive.

27. The backplane connector assembly of claim 23, wherein the doors comprise a foldable spring design that folds into the opening when a connector is inserted into the opening.

28. The backplane connector assembly of claim 23, wherein the doors comprise a spring biased element coupled to a hinge element.

29. The backplane connector assembly of claim 23, wherein the backplane housing defines a plurality of linearly stacked receiving cavities.

30. (Amended) A backplane connector assembly for making optical connections through a backplane, the connector assembly comprising

a backplane housing defining a plurality of linearly stacked receiving cavities through the backplane, the receiving cavities each having a frontal opening along the front surface of the backplane member configured to receive a first optical connector

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and a rear opening along the back surface of the backplane member configured to receive a second optical connector;

a single-piece integral spring member foldable frontal door at least covering a center portion of the frontal opening; and

a single-piece integral spring member foldable rear door at least covering a center portion of the rear opening;

wherein the doors automatically close when an optical connector member is not placed in the respective opening and automatically fold when a connector member is inserted into the respective opening, wherein the front door and the rear door operate independently from each other, wherein each door comprises a single stamped metal part having a first wing and a second wing and a hinge portion, and wherein each door in two adjoining linearly stacked receiving cavities comprises one of the wings and the hinge portion is attached to a dividing wall between the two adjoining receiving cavities.

31. The backplane connector assembly of claim 23, wherein the backplane housing includes frame features that assure a tight fit of the doors within the opening in a closed position.